What Is Claimed Is:

1. A DC/AC converter having two DC voltage connections (1,2), between which are provided in a parallel circuit configuration, an intermediate energy storage (C_1) and a bridge circuit providing at least two parallel branches, each providing two in-series-connected switch units (A,B and C,D), to each of which a rectifier diode (DA,DB,DC DD) is connected in parallel, and having at least two AC connections (3,4), of which each single one is connected via a connecting line (7,8), in each of which an inductor (L_1 respectively L_2) is provided, to one of said parallel branches of said bridge circuit between two said switch units (A,B respectively C,D) via one connecting node (5,6),
wherein between at least two said connecting lines (7,8), two separate electrical connecting paths (9,10) are provided, in each of which a switch (E respectively F) and an in-series-switched rectifier diode (DE respectively DF) are provided, and said rectifier diodes (DE,DF) in said single connecting paths (9, 10) are switched to each other in opposite conducting direction.

2. The DC/AC converter according to claims 1,
wherein a control unit switches said switches (E,F) in dependence on an AC voltage fed to said AC voltage connections (3,4) in such a manner that said switch (E,F), whose said respective rectifier diode (DE,DF) is oriented in the conducting direction for a current direction predetermined by the AC voltage source along said respective connecting path (9,10), is closed at least at sometime inside said respective connecting path (9,10) during a half wave of the AC voltage, while said other switch (E,F) is open.

3. The DC/AC converter according to claim 2,
wherein said individual switches (E,F) are switchable in said connecting paths (9,10) in a time-synchronized manner with the positive respectively negative half waves of the AC voltage fed to said AC voltage connections (3,4).

4. The A DC/AC converter according to claim 2 or 3,
wherein said AC voltage is a low-frequency grid voltage U_{Netz} having a frequency of 50 Hz or 60 Hz.

5. The DC/AC converter according to claims 2,
wherein said control unit opens said closed switch (E,F) even before the half wave of the AC voltage does its potential zero crossing so that both said switches (E, F) are open until the start of the next half wave.

6. The DC/AC converter according to claims 3,
wherein said control unit opens said closed switch (E,F) even before the half wave of the AC voltage does its potential zero crossing so that both said switches (E, F) are open until the start of the next half wave.

7. The DC/AC converter according to claim 2,
wherein said control unit is provided with constant time function elements which are attuned in dependence on the AC voltage and actuate said switches (E,F) with a constant switch-on period.

8. The DC/AC converter according to claims 2,
wherein said control unit switches said switches (E,F) in dependence on a current flowing in said connecting paths (9,10) and on said AC voltage.

9. The DC/AC converter according to claim 1,
wherein between said two separate electrical connecting paths (9,10), an electrical connection (11) is provided.

10. The DC/AC converter according to claim 9,
wherein said electrical connection (11) is connected to one said connecting path (9, 10) respectively dead center between said switches (E,F) and said in-series-connected rectifier diode (DE, DF).

11. A DC/AC converter having two DC voltage connections (1,2), between which are provided in a parallel circuit configuration, an intermediate energy storage (C_1)

and a bridge circuit providing at least two parallel branches, each providing two in-series-connected switch units (A,B and C,D), to each of which a rectifier diode (DA,DB,DC DD) is connected in parallel, and having at least two AC connections (3,4), of which each single one is connected via a connecting line (7,8), in each of which an inductor (L_1 respectively L_2) is provided, to one of said parallel branches of said bridge circuit between two said switch units (A,B respectively C,D) via one connecting node (5,6),
wherein between said at least two connecting lines (7,8), a circuit configuration is provided which can be actuated in such a manner that said circuit configuration electrically connects said at least two connecting lines (7,8) with each other in a first state and insulates said two connecting lines (7,8) from each other in a second state.

12. The DC/AC converter according to claim 11,
wherein a control unit switches said circuit configuration in dependence on an AC voltage fed to said AC voltage connections (3,4) in such a manner that said circuit configuration assumes said first state at the start and during a half wave of the AC voltage when said switch units A,B,C,D are open and assumes said second state when at least one of said switch units A,B,C,D is closed, and
towards the end of a respective half wave said circuit configuration remains open until the start of the next half wave.

13. The DC/AC converter according to claim 11 or 10,
wherein said circuit arrangement provides a switch.

14. The DC/AC converter according to claim 2,
wherein said switch units (A and D) and (B and C) are disposed in the from of a cross in relation to each other inside the bridge circuit, and the rectifier diodes (DA and DD) as well as (DB and DC) allocated to said switch units are oriented in a lock direction to a current direction impressed in said parallel branches by an AC voltage applied to said AC connections in said parallel branches, and
said control unit opens and closes said switch units (A and D) or (B and C) in a synchronized manner according to a predeterminable time pattern in dependence on said AC voltage applied to said AC voltage connections.

15. The DC/AC converter according to claim 11,
wher in said switch units (A and D) and (B and C) are disposed in the from of a cross in relation to each other inside the bridge circuit, and the rectifier diodes (DA and DD) as well as (DB and DC) allocated to said switch units are oriented in a lock direction to a current direction impressed in said parallel branches by an AC voltage applied to said AC connections in said parallel branches, and
said control unit opens and closes said switch units (A and D) or (B and C) in a synchronized manner according to a predeterminable time pattern in dependence on said AC voltage applied to said AC voltage connections.

16. The DC/AC converter according to claim 14,
wherein said control unit opens said switch units (A and D) according to said time pattern during the one half wave of said AC voltage and closes said switch units (A and D) according to said time pattern while said switch units (B and C) are open, and said control unit opens said switch units (B and C) according to said time pattern with the next half wave and closes said switch units (B and C) according to said time pattern while said switch units (A and D) are open.

17. The DC/AC converter according to claim 15,
wherein said control unit opens said switch units (A and D) according to said time pattern during the one half wave of said AC voltage and closes said switch units (A and D) according to said time pattern while said switch units (B and C) are open, and said control unit opens said switch units (B and C) according to said time pattern with the next half wave and closes said switch units (B and C) according to said time pattern while said switch units (A and D) are open.

18. The DC/AC converter according to claim 16,
wherein said switch units (A,B, C, D) are switchable with switch frequencies in the kHz range.

19. The DC/AC converter according to claim 17,
wh r in said switch units (A,B, C, D) are switchable with switch frequencies in the kHz range.

20. The DC/AC converter according to claim 14,
wherein said time pattern corresponds to a pulse width modulation.

21. The DC/AC converter according to claim 15,
wherein said time pattern corresponds to a pulse width modulation.

22. The DC/AC converter according to claim 1,
wherein said intermediate energy storage is designed as a capacitor (C_1).

23. The DC/AC converter according to claim 11,
wherein said intermediate energy storage is designed as a capacitor (C_1).

24. The DC/AC converter according to claim 1,
wherein said electrical connecting paths (9,10) are provided between said inductors (L_1,L_2) respectively and said connecting nodes (5,6) between said at least two connecting lines (7,8).

25. The DC/AC converter according to claim 11,
wherein said electrical connecting paths (9,10) are provided between said inductors (L_1,L_2) respectively and said connecting nodes (5,6) between said at least two connecting lines (7,8).

26. The DC/AC converter according to claim 1,
wherein between said connecting paths (7,8) and said AC voltage connections (3,4), an additional connecting path (12) is provided between said connecting lines (7, 8) along which a switch S and an additional buffer capacitor C_2 are connected in series.

27. The DC/AC converter according to claim 11,
wherein between said connecting paths (7,8) and said AC voltage connections (3,4), an additional connecting path (12) is provided between said connecting lines (7, 8) along which a switch S and an additional buffer capacitor C_2 are connected in series.

28. A DC/AC converter having two DC voltage connections (1,2), between which are provided in a parallel circuit configuration, an intermediate energy storage (C_1)

and a bridge circuit providing at least two parallel branches, each providing two in-series-connected switch units (A,B and C,D), to each of which a rectifier diode (DA,DB,DC DD) is connected in parallel, and having at least two AC connections (3,4), of which each single one is connected via a connecting line (7,8), in each of which an inductor (L_1 respectively L_2) is provided, to one of said parallel branches of said bridge circuit between two said switch units (A,B respectively C,D) via one connecting node (5,6),

wherein between said at least two connecting lines (7,8), electrical connecting paths (9,10) are provided, in each of which a component configuration is provided, each of which being designed in such a manner that the effect is the same as that of a configuration in which one switch (E respectively F) and a rectifier diode (DE respectively DF) connected in series are provided each in said connecting line (7,8), with said rectifier diodes (DE,DF) being switched to each other in said individual connecting paths (9,10) in opposite conducting direction.

29. Use of said DC/AC converter according to claims 1, 11 or 28 as a grid DC/AC converter.

30. Use according to claim 29,

wherein a photovoltaic unit or a fuel cell unit is applied to said AC voltage connections (1,2) to generate AC voltage, and a grid voltage with 50 Hz or 60 Hz AC voltage is applied to said AC voltage connections (3,4).

31. Use of said DC/AC converter according to claims 1, 11 or 28 as a DC/AC converter in island operation.

32. Use according to claim 29,

wherein said DC/AC converter is transformerless.

33. Use according to claim 31,

wherein said DC/AC converter is transformerless.